REMARKS

In the office action, the examiner rejected claims 1 and 3-19 under 35 U.S.C. 112, second paragraph, as being indefinite failing to particularly point out and distinctly claim the subject matter of the invention. Accordingly, the applicant has amended the set of claims to more clearly specify the features of the present invention. Especially, the applicant has incorporated the exact languages suggested by the examiner with respect to the rejection to claims 1 and 12. The applicant has amended other claims to be consistent with the amendment made in claims 1 and 12. With respect to the indefiniteness rejection to claim 17, the applicant has canceled claims 17-19.

In the office action, the examiner rejected claims 12-16 under 35 U.S.C. 102(e) as being anticipated by Chen et al. (U.S. Patent No. 6,496,701). It is stated that the cited Chen et al. reference discloses a pattern recognition based geolocation system and method for identifying the location of a mobile terminal wherein there is included a storing means 34 for storing simulated patterns of base station data where the database may be created by the construction of a statistical model using an RF propagation formula.

The applicant has amended claim 12 so that the scope of claim 12 is substantially the same as that of claim 1. Especially, claim 12 now includes the limitation of simulation means for generating simulated patterns of intensities and emitting directions of a simulated radiowave emission from one position to a plurality of

positions in the observation area through computations performed while changing the emitting direction of the simulated radiowave and storing the results. After operating the simulation means and creating the simulated patterns, the radiowave monitoring apparatus measures at one position a pattern of intensities and arrival directions of a radiowave emitted from a radiowave emitting source. Then, the radiowave monitoring apparatus compares the measured pattern with the simulated patterns of plurality of position to identify the position of the radiowave emitting source.

As is clear from the recitation in the claims, for detecting the location of the radiowave emitting source, the radiowave monitoring apparatus measures radiowave from the radiowave emitting source. It should be noted that there is no radiowave transmission from the radiowave monitoring apparatus measures radiowave to the radiowave emitting source. This is because the radiowave emitting source is typically an illegal radio station as stated in the specification of the instant case. Thus, the radiowave monitoring apparatus of the present invention is designed to detect the location of the radiowave emitting source without involving bilateral communication or signal exchange because there can be no intimate relationship with the radiowave emitting source.

In contrast, in the technology disclosed by the cited Chen et al. reference, the mobile unit 30 measures the RF signals from the base stations BS that are associated with the attributes/properties and reports the results to the base station BS_1 which in turn,

reports to the geolocation server 32. The geolocation server 32 statistically compares the measured values with the known attribute values of all sub-cells in a predefined area. The sub-cell that has the best matched set of attribute values with the measured values is the one that the mobile unit 30 is reported to be in. The known set of attribute values in the database 34 for each sub-cell account statistically for weather conditions, time of day, and other environmental variations that could affect the RF characteristics. Obviously, the mobile unit 30 and the base station BS bilaterally communicate with one another, i.e, actually exchange signals or data therebetween, to determine the location of the mobile unit 30.

As noted above, there is no such communication between the radiowave monitoring apparatus and the radiowave emitting source. Thus, the principle of operation of the present invention is fundamentally different from that of the cited Chen et al. reference. Accordingly, the applicant respectfully submits that the rejection under 35 U.S.C. 102(e) is no longer applicable to the present invention.

In the office action, the examiner rejected Claims 12-16 under 35 U.S.C. 103(a) as being unpatentable over either one of Hilsenrath et al. (U.S. Patent No. 6,026,304) or Wax et al. (U.S. Patent No. 6,249,680). In claim 12, the applicant has incorporated the changes suggested by the examiner regarding the simulation means to overcome the 35 U.S.C. 112 second paragraph rejection

which, the applicant believes, is also effective to overcome the 35 U.S.C. 103(a) rejection. The Wax et al. reference is a continuation-in-part of the cited Hilsenrath et al. reference. In the office action, the examiner relies on the same technology disclosed by the both references.

In the method of either the cited Hilsenrath et al. or Wax et al. reference, the signature of an actual signal from the mobile radio transmitter and its position information are collected in advance in the database at the base station as calibration signatures. The location of the mobile radio transmitter is determined by comparing the signatures detected by the array of antennas with the calibrated signatures in the data base. In other words, the actual signals have to be used both in creating the database and in comparing the signatures. Thus, the cited Hilsenrath et al. or Wax et al. reference does not show the simulation means of the present invention which creates the simulated patterns through the computer simulation without using any actual radiowave.

Further, for determining the signature unique to the mobile radio transmitter, the antenna array must be used to produce array vectors. As shown in the cited references, the antenna array includes a plurality of antennas, for example, three antennas to form a three-dimensional array vector when receiving the multipath signals. The present invention does not require to use such an antenna array, because the simulated patterns of intensities and

emitting directions of the simulated radiowave emission from one position to a plurality of positions are established in advance through computations by the simulation means.

As discussed above, the present invention defined in the claims as amended is fully distinguishable from the technologies disclosed by the cited Hilsenrath et al. or Wax et al. reference. Therefore, the rejection under 35 U.S.C. 103(a) is no longer applicable to the present invention.

As has been described above, the applicant believes that the pending claims are in the condition for allowance, and the applicant respectfully requests that the present application be allowed and passed to issue.

Respectfully submitted,

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